

## **REMARKS/ARGUMENTS**

Applicant would like to thank the examiner for the careful consideration given the present application. By the present amendment, claims 1-4, 6, 9-16, 19-24, 26, 29-35, 38-42, 44, 47-51, 53, 56-61, 63-68, and 70 remain in this application. Claims 7, 8, 17, 18, 27, 28, 36, 37, 47, 48, 54, 55, 62, and 69 are canceled in this amendment while claims 5, 25, 43, and 52 have been canceled previously. Applicant amends claims 1, 9, 11, 19, 21, 29, 30, 34, 38, 39, 47, 48, 56, 57, 63, 64, and 70 in the present application to more clearly and particularly describe the claimed subject matter. Applicant respectfully requests reconsideration and allowance.

### ***Claim Rejections - 35 USC § 102***

Claims 30-33 and 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Warnes (US Patent No. 7,051,189). The rejection is respectfully traversed for at least the following reasons, although independent claim 30 has been amended to distinguish further the claimed subject matter from the reference.

First, independent claim 30, in part, explicitly requires a step of “determining number of registers needed to execute operations” and “wherein the tuning of the instruction set is based on the frequency of use of the plurality of registers and the number of registers needed to executed operations.<sup>1</sup>” Warnes does not explicitly teach the above-mentioned limitations. Warnes merely discloses using 32-bit ISA registers R0-R3 and R13-16 instead using 3-bit Compressed ISA registers 0-7 as the examiner asserted in the Office action (see pp. 3), which is distinguished from “determine number of registers needed to execute operations”. Furthermore, Warnes fails to teach that the tuning of instruction set is “based on the number of registers needed to executed operations” as well.

Second, independent claim 30 has been amended by incorporating the limitations in dependent claims 36 and 37. Amended claim 30, in part, also explicitly requires a step of “providing a representation of operation frequency, which represents the frequency of operations, the representation of operation frequency being a frequency distribution”. Warnes fails to teach the above-mention limitation. Upon close review of the passages that the examiner cited against the patentability of claims 36 and 37 (col. 13, lines 3-64 and col. 7, lines 40 through col. 8, lines 54), it is respectfully submitted that Warnes does not explicitly teach a step of providing a frequency distribution representing the frequency of operations performed as required in amended claim 30.

In view of the differences between the claimed subject matter and the cited reference, applicant respectfully submits that amended independent claim 30 is allowable over the reference, and withdrawal of the rejection is respectfully requested.

Claims 36 and 37 are canceled in the present amendment while their limitations have been incorporated into independent claim 30.

Claims 31-33 and 38 depend from independent claim 30 and are, therefore, allowable for at least the reasons provided in support of the allowability of claim 30.

Claims 64-70 are rejected under 35 U.S.C. 102(e) as being anticipated by Srinivasamurthy (US Publication No. 2005/0028132 A1).

Independent claim 64 has been amended by incorporating the limitation in claim 69. Amended claim 64, in part, explicitly requires a means for “providing a representation of operation frequency, which represents the static frequency of operations and the executed frequency of operations, the representation of operation frequency being a frequency distribution” and “wherein the tuning of the instruction set is based on the representation of

operation frequency.” Srinivasamurthy fails to teach the above-mention limitations. Upon close review of the passages that the examiner cited against the patentability of claim 69 ([0017], [0041], [0067], and [0075]), it is respectfully submitted that Srinivasamurthy does not explicitly teach the means for “providing a representation of operation frequency, which represents the static frequency of operations and the executed frequency of operations, the representation of operation frequency being a frequency distribution”. The cited passages in the Srinivasamurthy reference merely disclose generating an embedded Java virtual machine (JVM) for a specific domain of applications based on embedding semantically enriched code in the interpreter loop of the JVM (see [0017]), which is distinguished from the frequency distribution representing the static frequency of operations and the executed frequency of operations as required in amended claim 64. In view of the differences between the claimed subject matter and the cited reference, applicant respectfully submits that amended independent claim 64 is allowable over the reference, and withdrawal of the rejection is respectfully requested.

Claim 69 is canceled in the present amendment while its limitation has been incorporated into independent claim 60.

Claims 65-68 and 70 depend from independent claim 64 and are, therefore, allowable for at least the reasons provided in support of the allowability of claim 64.

#### ***Claim Rejections - 35 USC § 103***

Claims 1-4, 7-15, 17-20, 39-42, 45-51, and 54-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasamurthy in view of US Patent Publication No. 2003/0041320 A1 to Sokolov.

Claims 6, 16, 44, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasamurthy in view of Sokolov and US Patent No. 6,718,539 to Cohen *et al*, hereinafter “Cohen”.

Claims 21-24, 27-29, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warnes in view of Sokolov.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warnes in view of Sokolov and Cohen.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warnes in view of Cohen.

Independent claims 1, 11, 21, 39, 48, and 57 have been amended by incorporating the limitations in dependent claims 7, 8, 17, 18, 27, 28, 45, 46, 54, 55 and 62 to distinguish further the claimed subject matter from the cited references.

Similar to the arguments made above with respect to the rejection of claims 30 and 64, Srinivasamurthy and Warnes fail to disclose “providing a representation of operation frequency, which represents the static frequency of operations and the executed frequency of operations, the representation of operation frequency being a frequency distribution”. Furthermore, neither Sokolov nor Cohen overcomes the deficiency of Srinivasamurthy or Warnes. Thus, withdrawal of the rejections of independent claims 1, 11, 21, 39, 48, and 57 is respectfully requested.

Claims 7, 8, 17, 18, 27, 28, 45, 46, 54, 55 and 62 are canceled in the present amendment.

Claims 2-4, 6, 9, 10, 12-16, 19, 20, 22-24, 26, 29, 40-42, 44, 47, 49-51, 53, 56, 58-61, and 63 depend from either one of independent claims 1, 11, 21, 39, 48, or 57 and are, therefore, allowable for at least the reasons provided in support of the allowability of claim 1, 11, 21, 39, 48, and 57.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. ACER-45269.

Respectfully submitted,  
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